temporarily stopping discharges to facilitate construction or dredging.

The Lake Gentry extreme drawdown regulation schedule would remain at 56.5 ft NGVD until June 1 of the second calendar year of Lake Gentry's extreme drawdown. On that date, the schedule would rise vertically to the summer pool elevation of 61.0 ft NGVD, and Lake Gentry would be allowed to refill. The rate of refilling for Lake Gentry will be largely dependent on rainfall. The proposed modification to the Alligator Chain's regulation schedule in the second calendar year of Lake Gentry's extreme drawdown should allow for some storage which would assist the refill of Lake Gentry. With normal rainfall, Lake Gentry should return to normal low pool stages before Fall of the second calendar year. In a single- or multi-year drought condition, the Lake Gentry lake elevations may not return to their normal regulation ranges until the drought ends and a normal rainy season is experienced.

- (1) Normal Ranges of Water Level Regulation. For comparison to the modified regulation schedules described above, the following information about normal water level regulation is provided: The regulation schedule for the Alligator Chain normally varies from 62.0 to 64.0 ft during the year (or from 61.5 to 64.0 ft one year in three). The regulation schedule for Lake Gentry normally varies from 59.5 to 61.5 ft during the year (or from 59.0 to 61.5 ft one year in three). However, water levels above and below these ranges can occur.
- c. Regulation Schedule Changes for Lakes Joel, Myrtle, and Preston. The regulation schedule for these lakes would also be modified for the Alligator Chain extreme drawdown portion of the Lake Gentry Postponement Alternative. Additional water would be stored in these lakes to aid in the refilling of the Alligator Chain. The regulation schedule for Lakes Joel, Myrtle, and Preston would remain at the high pool elevation of 62.0 ft from November of the first calendar year through May of the second calendar year. Beginning 1 June, the regulation schedule would decline to the summer pool elevation of 61.0 ft by 15 June. Beginning 1 June, when in Zone A, releases through S-58 may be made as necessary to help refill the Alligator Lake Chain. Also, in Zone B1 which begins on 15 June, releases through S-58 may be made as necessary to help refill the Alligator Lake Chain. Despite the above changes, the modified regulation schedule elevations for Lakes Joel, Myrtle, and Preston would be within the normal range of regulation for these lakes.
- d. <u>Historic Water Levels</u>. Historic Alligator Lake water levels before and after the C&SF Project was put in place are shown in Figures 10 and 11, respectively (SFWMD, 1997). Daily water level records for Alligator Lake extend back to November 1941. Figures 12a through 12m show historic Alligator Lake water levels for the period of record 1942-1998. Figure 13 shows Alligator Lake water levels for the same period of record, all on one graph. The data used in preparing the above graphs are

provisional and subject to revision. Missing data are denoted by "x"'s.

- Stage-Duration Curves. Figure 14 contains stage-duration curves for Alligator Lake for the periods January 1942 - December 1965 and January 1966 - December 1998. The period January 1942 -December 1965 was selected to represent the approximate period prior to completion of C&SF Project features in the Alligator Lake Chain and Lake Gentry area. This construction took place generally in the mid-1960's and Kissimmee Basin project works were completed in 1970; structure S-60 and canal C-33 were constructed during the years 1965-66. Each curve in Figure 14 shows, for the indicated period of record, the percent of time during which the Alligator lake stage exceeded the values indicated on the vertical axis. Note, in the period January 1966 - December 1998, that the range of water level fluctuation has been reduced due to operation of the C&SF Project. The data used in preparing these curves are provisional and subject to revision.
- f. Stage-Duration Curves for Daily Stages by Month. Figure 15 contains stage-duration curves for Alligator Lake daily stages by month for the period 01 January 1942 31 December 1998. It contains plots of the 10, 25, 50, 75. and 90 percentiles through the calendar year for the above period of record. For example, for a given day in the calendar year, the "P90" plot shows the stage at which 10 percent of the stage values on that day were greater, for the above period of record. Likewise, for a given day in the calendar year, the "P25" plot shows the stage at which 75 percent of the stage values on that day were greater, for the above period of record. Figures 16 and 17 contain similar stageduration curves for the periods 01 January 1942 31 December 1965 and 01 January 1966 31 December 1998, respectively. These two periods were selected to represent the approximate periods before and after completion of C&SF Project features. The data used in preparing these curves are provisional and subject to revision.
- Analysis of Proposed Drawdown and Refilling by SFWMD. The SFWMD has evaluated the probabilities of successfully drawing down the Alligator Lake Chain and Lake Gentry and of refilling them under various rainfall conditions. The computer program KROUTE was utilized in this analysis. KROUTE is a module of the UKISS (Upper Kissimmee Chain of Lakes) Routing Model which is used to forecast daily water levels and flows in the Upper Kissimmee Chain of Lakes. Figure 18 shows Alligator Lake Chain estimated water levels under the proposed drawdown plan in the cases of wet and normal conditions. Figure 19 shows a similar graph for Lake Gentry. Figure 20 shows Alligator Lake Chain estimated water levels during refilling in the cases of wet, normal, and dry conditions. Figure 21 contains a similar graph for Lake Gentry. However, Lake Gentry should refill more quickly than indicated in the graph in Figure 21 under the same rainfall conditions because of the use of some water from the Alligator

Chain in refilling Lake Gentry. In a single- or multi-year drought condition, the Alligator Lake Chain water levels would probably not return to their normal regulation ranges until the drought ends and a normal rainy season is experienced. In a single- or multi-year drought condition, Lake Gentry may not return to its normal regulation ranges until the drought ends and a normal rainy season is experienced.

- Temporary Structure and Pump in C-32C. For the Alligator Chain's extreme drawdown, in order to lower lake levels in the Alligator Chain to the desired elevations within a reasonable timeframe, it will be necessary to pump water out of Trout Lake and to the north. Pumping may also be done to maintain low water levels in the Alligator Chain prior to refilling. The drawdown plan calls for a pump to be placed in Canal 32C (C-32C) north of Trout Lake and for water to be pumped towards S-58 and Lake Joel. The canal would be blocked off from Trout Lake by an earthen plug with a culvert riser to prevent water from flowing back into Trout Lake. The plug would block navigation between Trout Lake and S-58. Placement of the plug in the canal could begin as early as 1 August of the first calendar year. The pump would be removed after the start of refilling which is scheduled to begin June 1 of the second calendar year. The plug would be removed during refilling when the water level in Trout Lake reaches or exceeds the water level in Lake Joel.
- 3. Temporary Structure in Brick Lake Canal. Brick Lake Canal connects Brick Lake with Alligator Lake. To address issues raised by local landowners, the SFWMD has been investigating the possibility of installing a temporary structure in the vicinity of Brick Lake Canal. If installed, the temporary structure would maintain water levels in Brick Lake higher than in the rest of the Alligator Chain during the Alligator Chain's extreme drawdown.

The original plan for a temporary structure to maintain water levels in Brick Lake would have the temporary structure located in Brick Lake Canal. However, negotiations with landowners were unsuccessful. Therefore, if a temporary structure is installed to maintain water levels in Brick Lake, it will not be located in the original planned location in Brick Lake Canal. However, as of mid-August 1999, the SFWMD is considering installation of a water control structure in Alligator Lake just outside of Brick Lake Canal. However, there is no guarantee that a temporary structure will be installed to maintain water levels in Brick Lake during the Alligator Chain's extreme drawdown.

If a temporary structure is constructed to maintain water levels in Brick Lake, the temporary structure would have a water control elevation of about 62.5 ft, which is within the normal range of regulation schedule elevations for the Alligator Chain. The temporary structure would be installed sometime after October of the first calendar year of the Alligator Chain's extreme drawdown. The temporary structure would be removed during the

Alligator Chain's refill period which begins June 1 of the second calendar year. The temporary structure would be removed shortly after the stage in Alligator Lake reaches or exceeds the stage in Lake Brick.

- Maintenance Dredging. The lakes of the Alligator Chain and Lake Gentry are connected by canals which, over the years, have partially filled in with sediments. Maintenance dredging of these canals back to their original design standards would facilitate the flow of water between these lakes at the low water surface elevations to be reached during the drawdown. Maintenance dredging may be performed in Canal 33 (C-33) between Lakes Gentry and Alligator; in Canal 32F (C-32F) between Lakes Lizzie and Coon; and in Canal 32D (C-32D) between Lakes Coon and The SFWMD would complete this dredging prior to the start of the drawdown or possibly within the period November through The drawdown plan does not include dredging of Brick Lake Canal which connects Lakes Brick and Alligator. has some shallow areas. Even if a temporary structure is not constructed in the vicinity of Brick Lake Canal as discussed in item 3, above, Lake Brick water levels might not reach the same low elevations as in other lakes of the Alligator Chain.
- 5. Drawdown-Assist Dredging. At some locations, to assist in conveying water once water levels become very low, dredging beyond the limits of original canal design standards may also be necessary. This "drawdown-assist" dredging may be needed at the north end of Trout Lake to provide sufficient outflow to meet the capacity of the temporary pump in C-32C, and/or at the south end of Alligator Lake to provide sufficient outflow through C-33. Also, drawdown-assist dredging may be needed in Lakes Lizzie and Coon at both ends of C-32F, and/or in Lake Gentry at the mouth of C-33. The SFWMD would have this dredging completed prior to the start of the drawdown or possibly during the months November through February.
- Habitat Enhancement. Approximately 3,450 acres in the Alligator Lake Chain and Lake Gentry will be exposed. Organic bottom sediments should compact and consolidate during the scheduled 90-day low water period. Coverage of beneficial aquatic vegetation such as Kissimmee grass, eelgrass and bulrush should increase following refill due to germination of seeds exposed during the extreme drawdown. Muck removal, burning of dense vegetation, and a lakewide cleanup will be performed to enhance aquatic habitat. Muck removal is planned for seventeen sites totalling almost fifteen miles of shoreline. Approximately 475,000 cubic yards of organic material will be removed. The material will be disposed of on upland sites or used to create in-lake wildlife islands. Approximately two dozen islands will be created. In conjunction with muck removal, an aggressive burning program will be used to reduce plant biomass on about 1,000 acres.

APPENDIX II

FINAL ENVIRONMENTAL IMPACT STATEMENT PERTINENT CORRESPONDENCE



United States Department of the Interior

FISH AND WILDLIFE SERVICE

South Florida Ecosystem Office P.O. Box 2676 Vero Beach, Florida 32961-2676 June 24, 1997

Mr. Hanley K. Smith Acting Chief, Planning Division U.S. Army Corps of Engineers P.O. Box 4970 Jacksonville, Florida 32232-0019

Attention: Theresa Fretwell

Dear Mr. Smith:

Thank you for your June 3, 1997 letter requesting a list of threatened or endangered species likely to occur in the area to be affected by the proposed extreme drawdown of the Alligator Chain of Lakes in Osceola County, Florida. You included a description of the project and a map of its location. In view of our familiarity with the project and discussions with your staff, the Fish and Wildlife Service (FWS) has decided to enter informal consultation on this project in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (ESA).

The FWS is familiar with this project through the regular meetings of the Upper Chain of Lakes Regulation Schedule Steering Committee, which include participation by Jim Vearil, Adam Stuart, and Theresa Fretwell of the COE. My staff also toured the entire project area by boat on April 17, 1997, with representatives from a number of the participating agencies.

Based on the information availlable to us, we believe the project as currently proposed is not likely to adversely affect any Federally listed threatened or endangered species. The principal species we considered before reaching this conclusion were the endangered snail kite (Rostrhamus sociabilis plumbeus) and the threatened bald eagle (Haliaeetus leucocephalus). The snail kite is known to feed occasionally in the Alligator Chain of Lakes, but is not known to nest there; the project should have no significant adverse effect on the species in the short term and may benefit the species in the following years. The nearest eagle's nest (nest number OS022) to the proposed work is located approximately 1300 m (0.8 mi) west of Alligator Lake; the FWS considers that the proposed muck removal work is not likely to adversely affect the eagle's nest at this distance, particularly because pines and cypress trees shield the eagle's nest from the proposed activity. No critical habitat has been designated in the vicinity of the proposed project; therefore, none will be affected.

Although this does not constitute a Biological Opinion pursuant to section 7 of the ESA, it does fulfill the requirements of the ESA, and no further action is required. If modifications are made to the project or if additional information involving potential impacts on listed species becomes available, reinitiation of consultation may be necessary. We have assigned log number 4-1-97-I-582 to this informal consultation.

Thank you for your cooperation in the effort to protect threatened and endangered species. If you have and questions regarding this project, please contact Mr. Robert Pace at (561) 562-3909.

Sincerely,

raig Johnson

Supervisor, South Florida Ecosystem Restoration

Office

cc:

GFC, Kissimmee, Florida GFC, Vero Beach, Florida

EPARTMENT OF STATE

ie Secretary r International Relations sion of Administrative Services vision of Corporations vision of Cultural Affairs



MEMBER OF THE FLORIDA CABINET Division of Library & Information Services Division of Historical Resources Ringling Museum of Art Division of Licensing Division of Elections

FLORIDA DEPARTMENT OF STATE Sandra B. Mortham

Secretary of State DIVISION OF HISTORICAL RESOURCES

September 23, 1997

District Engineer c/o Elizabeth Bishop Merritt Island Field Office Jacksonville District Corps of Engineers 2460 North Courtenay Parkway, Suite 101 Merritt Island, Florida 32953

In Reply Refer To: Scott B. Edwards Historic Sites Specialist Project File No. 974658

Cultural Resource Assessment Request RE: Permit Application No. 199703143 (IP-EB) Applicant: State of Florida Game and Fresh Water Fish Commission Extreme Drawdown of Lake Center, Trout Lake, Coon Lake, Lake Lizzie, Alligator Lake, and Lake Gentry St. Cloud, Osceola County, Florida

To Whom It May Concern:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project for possible impact to historic properties listed, or eligible for listing, in the National Register of Historic Places. The authority for this procedure is the National Historic Preservation Act of 1966 (Public Law 89-665), as amended.

A review of the Florida Master Site File indicates that there are only two recorded sites within the project area (see enclosed maps). The lack of additional recorded sites is not significant as this area has never been subjected to a comprehensive professional cultural resources assessment survey to locate and evaluate archaeological sites. Nevertheless, these two known sites, 8OS30, the Alligator Lake Site which is recorded as a sand mound, and 8OS1776, the Bronson Site, which is a multi-component wetland-underwater site, should be avoided during all project activities. These two sites should be identified and the boundaries marked in the field so that adverse impacts from project activities, such as demucking, can be avoided. In addition, every effort must be made to restrict unauthorized collecting of these sites. Preventing the collection of artifacts and materials from significant archaeological sites, including projectile points, ceramic artifacts, dugout canoes, etc., will require patrolling identified site locations when they are most vulnerable.

DIRECTOR'S OFFICE

R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399-0250 • (850) 488-1480 FAX: (850) 488-3353 • WWW Address http://www.dos. state.fl.us

District Engineer September 23, 1997 Page 2

Another issue of concern to this agency is the identification of previously unrecorded sites or isolated artifact occurrences (i.e., dugout canoes) which will occur in two settings. First, the previously unrecorded, now submerged prehistoric habitation sites are expected to occur on now inundated shoals near deeper depressions/sink holes that would have been the water holes during much drier times. The second setting encompasses more modern prehistoric and early historic occurrences in the near shore landing areas of lake edge sites, which include trash disposal concentrations, dugout canoes, and possibly charnel houses. These sites will be discovered/reported occurrences during the course of the project and should be recorded and reported to this agency.

In summation, it is our recommendation that a professional archaeologist re-locate and clearly mark the two known archaeological sites in the field, so that all project activities can avoid these known sites, and thereby, these sites will not be adversely impacted. Once these known sites and other which will appear with the drawdown, are exposed and vulnerable, they will need to be patrolled to prevent vandalism and unauthorized collecting. This agency should be notified of any newly encountered cultural resources.

Thus, conditioned upon the above referenced stipulations, it is the opinion of this office that the proposed project will have no effect on historic properties listed, or eligible for listing in the National Register of Historic Places, or otherwise of historical or archaeological value and will be consistent with the historic preservation aspects of Florida's Coastal Management Program, and may proceed.

We look forward to working closely with all interested parties on this project. If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

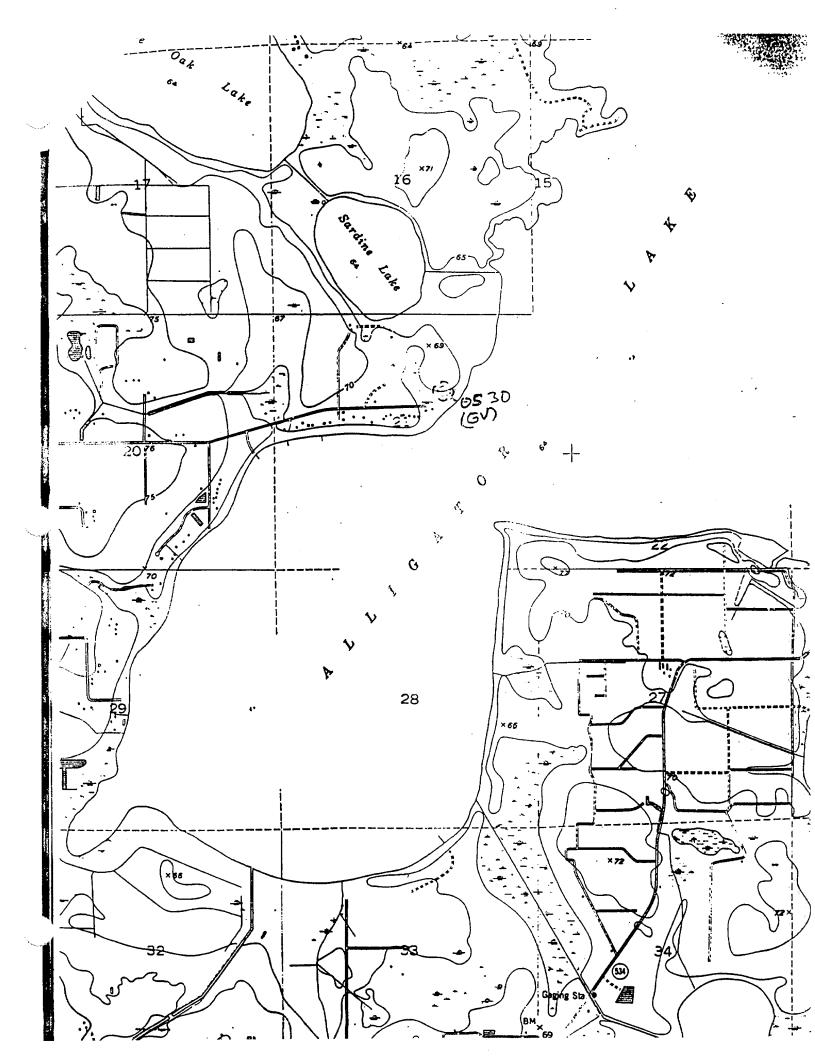
> Sincerely, Laura d. Kamme

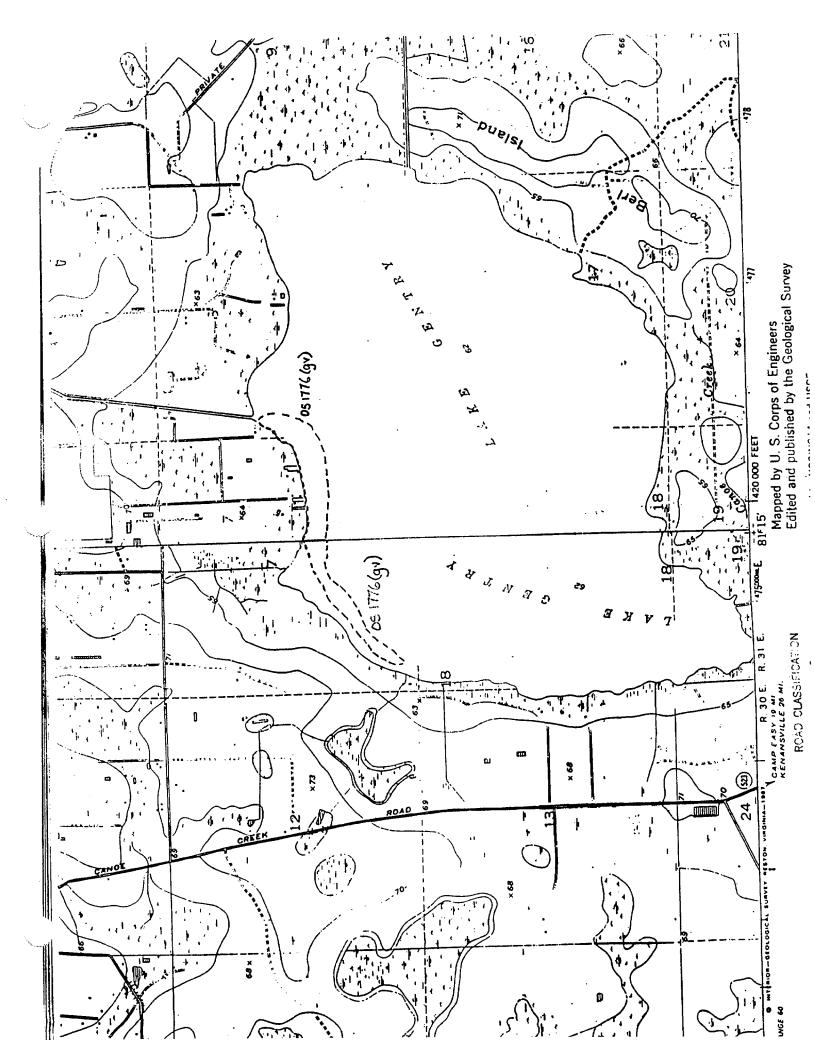
George W. Percy, Director
Division of Historical Resources

State Historic Preservation Officer

GWP/Ese

Enclosure (2)







Commander Seventh Coast Guard District 909 S.E. 1st Avenue Miami, FL 33130-3050 Staff Symbol: (oan) Phone: (305) 536-5621 FAX: (305) 530-7655

16500 Serial: 574

NOV 13 1998

Mr. George M. Strain
Acting Chief, Planning Division
United States Army Corps of Engineers
P.O. Box 4970
Jacksonville, FL 32232-0019

Dear Mr. Strain:

This letter is to advise you that the Coast Guard has no objection to the proposed drawdown of Lake Center, Trout Lake, Coon Lake, Lake Lizzie, Alligator Lake and Lake Gentry, in St. Cloud, Osceola County, Florida; Permit Application No 1997-03143 (IP-EB).

If you need additional information, please do not hesitate to call me at (305) 536-5621.

J.B. EMBRES

Chief, Planning and Marine Information Section Aids to Navigation Waterways Management Branch Seventh Coast Guard District

By direction of the District Commander

DEPARTMENT OF COMMUNITY AFFAIRS

"Helping Floridians create safe, vibrant, sustainable communities"

JEB BUSH Governor STEVEN M. SEIBERT Secretary

June 17, 1999

Ms. Christine Bauer
Department of the Army
Planning Division
Post Office Box 4970
Jacksonville, Florida 32232-0019

RE: Department of the Army - Draft Environmental Impact Statement - Alligator Chain and Lake Gentry Extreme Drawdown and Habitat Enhancement Project - Osceola County, Florida SAI: FL9904150238C

Dear Ms. Bauer:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The Florida Game and Fresh Water Fish Commission (GFWFC) notes its support of the preferred alternative, lowering Alligator Lake to 60.0 feet and Lake Gentry to 56.5 feet. The GFWFC could only support option 4, delaying the drawdown of Lake Gentry, if this is the only way to accomplish the goal of aquatic habitat enhancement. Please refer to the enclosed GFWFC comments.

The Department of State (DOS) notes that in a previous review of this project (DHR No. 974658), the DOS recommended that a professional archaeologist re-locate and clearly mark the two known archaeological sites to avoid impacts from project activities. Once the known sites, and others which will appear with the drawdown, are exposed and vulnerable, they will need to

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100 Phone: (850) 488-8466/Suncom 278-8466 FAX: (850) 921-0781/Suncom 291-0781 Internet address: http://www.state.fl.us/comaff/

FLORIDA KEYS Area of Critical State Concern Field Office 2796 Overseas Highway, Suite 212 Marathon, Florida 33050-2227 GREEN SWAMP Area of Critical State Concern Field Office 205 East Main Street, Suite 104 Barlow, Florida 33830-4641 Ms. Christine Bauer June 17, 1999 Page Two

be patrolled to prevent vandalism and unauthorized collecting. The DOS should be notified of any newly encountered cultural resources. The DOS looks forward to future coordination with the GFWFC regarding this action. Please refer to the enclosed DOS comments.

The Department of Environmental Protection (DEP) notes no objections to the proposed project, but does offer several comments. Please refer to the enclosed DEP comments.

Based on the information contained in the draft environmental impact statement and the enclosed comments provided by our reviewing agencies, the state has determined that, at this stage, the above-referenced project is consistent with the Florida Coastal Management Program (FCMP). All subsequent environmental documents prepared for this project must be reviewed to determine the project's continued consistency with the FCMP. The state's continued concurrence with the project will be based, in part, on the adequate resolution of issues identified during this and subsequent reviews.

Enclosed are all comments received to date from the reviewing agencies. Comments subsequently received by the State Clearinghouse will be forwarded for your review.

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact Ms. Cherie Trainor, Clearinghouse Coordinator, at (850) 922-5438.

Sincerely,

Ralph Cantral, Executive Director Florida Coastal Management Program

RC/cc

Enclosures

cc: Bradley Hartman, Game and Fresh Water Fish Commission George Percy, Department of State Marlane Castellanos, Department of Environmental Protection

		COMMENTS DUE		04/19/1999 05/04/1999 05/31/1999
essage:			SAI#:	FL990415023
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Department of Environmental Protection

Jeb Bush Governor

June 15, 1999

David B. Struhs Secretary

Cherie Trainor
State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

State of Florida Clearinghouse

RE:

Draft EIS for Alligator Chain and Lake Gentry Extreme Drawdown and Habitat Enhancement

Project, Osceola County

SAI: 99-0238C

Dear Ms. Trainor:

The Florida Department of Environmental Protection (FDEP) has completed its review of the above-referenced draft Environmental Impact Study for the Alligator Chain and Lake Gentry Extreme Drawdown. While we have no objections to the project, we do offer the following comments.

This project was permitted by FDEP two years ago but was delayed by the permittee bacause of the concerns of area fish farm operators. After these objections were raised, and in order to project effects of the extreme drawdown on these farms in the area, a total of 19 monitoring wells were emplaced. Soil borings to a depth of 20 feet were also conducted at each site. A trial drawdown was conducted during a regularly maintained schedule of drawdowns in the lakes and the data was applied to a model. This model shows a cone of influence within which there are two fish farms. Provisions for protecting these two farms are under discussion at this time. The other fish farms in the area are considered out of the cone of influence and, according to the modeling information, should not be impacted. However, in the unlikely event that this extreme drawdown should impact those located near the cone of influence, provisions for their protection should also be in place.

Thank you for the opportunity to comment on this project. If I can be of further assistance, please contact me at (850) 487-2231.

Sincerely,

Marlane Castellanos

Office of Intergovernmental Programs

Mailan Crestellanos

MC/



FLORIDA GAME AND FRESH WATER FISH COMMISSION



THOMAS B. KIBLER Lakeland JAMES L. "JAMIE" ADAMS Jr. Bushnell JULIE K. MORRIS Sarasota

QUINTON L. HEDGEPETH, DDS Mismi EDWIN P. ROBERTS, D.C. Pensacola

ALLAN L. EGBERT, Ph.D., Executive Director VICTOR J. HELLER, Assistant Executive Director

Ms. Cherie Trainor
Florida State Clearinghouse
Department of Community Affairs
2555 Shumard Oak Blvd.
Tallahassee. FL 32399-2100

May 12, 1999

OFF ICE OF ENVIRONMENTAL SERVICES
BRADLEY J. HARTMAN, DIRECTOR
FARRIS BRYANT BUILDING
620 South Meridian Street
Tallahassee, FL 32399-1600

20 South Meridian Street lahassee, FL 32399-1600 (850) 488-6661 SUNCOM 278-6661 FAX (850) 922-5679 TDD (850) 488-9542

State of Florida Clearinghouse

RE:

SAI #FL9904150238C, Osceola County, Alligator Chain & Lake Gentry Extreme Drawdown DEIS

Dear Ms. Trainor:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission (GFC) has reviewed the referenced document, and offers the following comments.

The GFC's Division of Fisheries is a cooperator on this project. We support the preferred alternative - lower Alligator Lake to 60.0 feet and Lake Gentry to 56.5 feet (see attached comments from Division of Fisheries). We could only support option 4, delaying the drawdown of Lake Gentry, if this is the only way to accomplish our goal of aquatic habitat enhancement.

Sincerely,

Bradley J. Hartman, Director Office of Environmental Services

Busi Barnett, for

BJH/SRL/gk ENV 1-3-2 Attachment drawdown

COUNTY: Osceola Message:		DATE: DMMENTS DUE-2 WKS: EARANCE DUE DATE:	04/19/1999 05/04/1999 05/31/1999
		SAI#:	FL99041502
STATE AGENCIES	WATER MANAGEMENT DISTRICTS	OPB POLIC	CY UNITS
Agriculture Community Affairs Environmental Protection Game and Fresh Water Fish Comm X OTTED State	South Florida WMD St. Johns River WMD	Environmental Pol	icy/C & ED
Transportation		APR 21 1999 State of Florida Clearing	phouse
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DIVISIONS OF FLORIDA DEPARTMENT OF STATE

Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
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Division of Administrative Services



FLORIDA DEPARTMENT OF STATE Katherine Harris

Secretary of State

May 13, 1999 DIVISION OF HISTORICAL RESOURCES

Ms. Cherie Trainor
State Clearinghouse
Department of Community Affairs

2555 Shumard Oak Boulevard Tallahassee, Florida 32399-2100 MAY 1 8 1999

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State of Elevida Clearing 104583

RE:

DHR Project File No. 992653

Cultural Resource Assessment Request

SAI# FL9904150238C

Draft Environmental Impact Statement - Alligator Chain and Lake Gentry Extreme

Drawdown and Habitat Enhancement Project

Osceola County, Florida

Dear Ms. Trainor:

We have reviewed the referenced draft environmental impact assessment. We specifically reviewed sections 3.09 and 4.06, both dealing with Historic, Cultural and Archaeological Resources. We note that a previous review of this project (DHR No. 974658) this agency recommended that a professional archaeologist re-locate and clearly mark the two known archaeological sites in the field, so that all project activities can avoid these known sites, and thereby, these sites will not be adversely impacted. Once these known sites and other which will appear with the drawdown, are exposed and vulnerable, they will need to be patrolled to prevent vandalism and unauthorized collecting. This agency should be notified of any newly encountered cultural resources.

We look forward to future coordination between Florida Game and Fresh Water Fish Commission and this office with regards to this action. Conditioned upon early and sufficient consultation with the State Historic Preservation Office the proposed Alligator Chain and Lake Gentry Extreme Drawdown and Habitat Enhancement Project will be consistent with the historic preservation laws of Florida's Coastal Management Program.

Ms. Trainor May 13, 1999 Page 2

If you have any questions concerning our comments, please contact Scott Edwards, Historic Preservation Planner, at 850-487-2333 or 800-847-7278. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

George W. Percy, Director Division of Historical Resources

and

State Historic Preservation Officer

Laura a. Kanmerer

GWP/Ese

xc: Jasmin Raffington, FCMP-DCA

ENTS DUE-2 WKS: 05/04/1999 RANCE DUE DATE: 05/31/1999 SAI#: FL99041502
OPB POLICY UNITS
R 2 8 1999
Project Description:
Department of the Army - Draft Environmental Impact Statement - Alligator Chain and Lake Gentry Extreme Drawdown and Habitat Enhancement Project - Osceola County; Florida.
Federal Consistency
No Comment/Consistent Consistent/Comments Attached Inconsistent/Comments Attached Not Applicable
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Er Gr Ot	griculture ommunity Affairs ivtronmental Protection ame and Fresh Water Fish Comm rTED ate ansportation	X South Florida WMD St. Johns River WMD	Finvironmental Policy/C & ED
	chod document requires a Coastal Zoni Management Program consistency eva		Project Description:
 X	f the following: Fodoral Assistance to State or Local of Agencies are required to evaluate the Direct Federal Activity (15 CFR 930, Singuired to furnish a consistency details.)	consistency of the activity.	Department of the Army - Draft Environmental Juniact Statement - Alligator Chain and Lake Centry Extreme Drawdown and Habitat Enhancement Project - Oscaola County, Florida
	Concurrence or objection. Outer Continental Shelf Exploration, Activities (15 CFR 930, Subpart E). O consistency certification for state con-	Development or Production perators are required to provide a	
	Federal Licensing or Permitting Active projects will only be evaluated for contralled on state license or permit.		
			
To:	Florida State Clearinghouse Department of Community Affair 2555 Shumard Oak Boulevard Tallahassee, FL 32399-2100 (850) 922-5438 (SC 292-5438 (850) 414-0479 (FAX)	☐ No Comment	☐ No Comment/Consistent ☐ Consistent/Comments Attached ☐ Inconsistent/Comments Attached ☐ Not Applicable ※
			GFWMD 19 A CO-AUTHUR OF THE DOCUMENT
Fro		-5114111/	011
	Division/Bureau:	SEDALL/1	•
	11100	HIGOINS,	
	Date: 5./4/99		

COUNTY: Osceola		COMMEN	DATE:	04/19/1999 05/04/1999
Message:	• .		NCE DUE DATE: SAI#:	05/31/1999 FL99041502380
STATE AGENCIES	WATER MANAGEMENT DISTRI	стѕ	OPB POLI	CY UNITS
Agriculture Community Affairs Environmental Protection Game and Fresh Water Fish Comm OTTED State Transportation	South Florida WMD X St. Johns River WMD		Environmental Po	licy/C & ED
		State	APR 28 1999 of Florida Clearing	shouse
The attached document requires a Coastal Z Coastal Management Program consistency of as one of the following: Federal Assistance to State or Loc	evalutation and is categorized cal Government (15 CFR 930, Subpart F).		Project Description Department of the Arm Impact Statement - Alli Gentry Extreme Drawd	y - Draft Environmental gator Chain and Lake
Agencies are required to evaluate Direct Federal Activity (15 CFR 930 required to furnish a consistency concurrence or objection. Outer Continental Shelf Exploration	0, Subpart C). Federal Agencies are determination for the State's		Enhancement Project -	Osceola County, Florida.
 Activities (15 CFR 930, Subpart E) consistency certification for state 	. Operators are required to provide a concurrence/objection.			
Federal Licensing or Permitting A projects will only be evaluated for analogous state license or permit				•
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To: Florida State Clearinghous Department of Community Af 2555 Shumard Oak Boulevar Tallahassee, FL 32399-2100 (850) 922-5438 (SC 292-5 (850) 414-0479 (FAX)	fairs d No Comments A	t ttached	Consistent/C	nt/Consistent Comments Attached /Comments Attached
From: Division/Bureau:	NOT IN SURWM SUNWMB/ORP	D.		
Reviewer:	1/22/	29		

FLORI A STATE CLEARINGHO E Canders RPC INTERGOVERNMENTAL COORDINATION AND RESPONSE SHEET

SAI #: FL9904150238C COMMENTS DUE TO CLEA		04/19/1999
AREA OF PROPOSED ACTIV	ITY: COUNTY: Osceola County	
FEDERAL ASSISTANCE	X DIRECT FEDERAL ACTIVITY FEDERAL LICENSE OR PERMIT	ocs
PROJECT DESCRIPTION Department of the Army - Draft Enhancement Project - Osceola	Environmental Impact Statement - Alligator Chain and Lake Gentry Extreme Drawdow. County, Florida.	n and Habitat
ROUTING:	RPC	
	X E. Central FL RPC	

PLEASE CHECK ALL THE LOCAL GOVERNMENTS BELOW FROM WHICH COMMENTS HAVE BEEN RECEIVED; ALL COMMENTS RECEIVED SHOULD BE INCLUDED IN THE RPC'S CLEARINGHOUSE RESPONSE PACKAGE. IF NO COMMENTS WERE RECEIVED, PLEASE CHECK "NO COMMENT" BOX AND RETURN TO CLEARINGHOUSE.

COMMENTS DUE TO RPC: 05/10/1999

NOTES:

NO COMMENTS:
(IF THE RPC DOES NOT RECEIVE COMMENTS BY THE DEADLINE DATE, THE RPC SHOULD CONTACT
THE LOCAL GOVERNMENT TO DETERMINE THE STATUS OF THE PROJECT REVIEW PRIOR TO
FORWARDING THE RESPONSE PACKAGE TO THE CLEARINGHOUSE.)

ALL CONCERNS OR COMMENTS REGARDING THE ATTACHED PROJECT (INCLUDING ANY RPC COMMENTS) SHOULD BE SENT IN WRITING BY THE DUE DATE TO THE CLEARINGHOUSE. PLEASE ATTACH THIS RESPONSE FORM AND REFER TO THE SAI # IN ALL CORESPONDENCE.

IF YOU HAVE ANY QUESTIONS REGARDING THE ATTACHED PROJECT, PLEASE CONTACT THE STATE CLEARINGHOUSE AT (904) 922-5438 OR SUNCOM 272-5438.

NOTES:

FLORIDA STATE CLEARINGHOUSE OF RPC INTERGOVERNMENTAL COORDINATION AND RESPONSE SHEET

SAI#: FL9904150238C			
COMMENTS DUE TO CLEA	RINGHOUSE: 05/19/1999	DATE	i: 04/19/1999
AREA OF PROPOSED ACTIV	TTY: COUNTY: Osceola County		
FEDERAL ASSISTANCE	X DIRECT FEDERAL ACTIVITY	FEDERAL LICENSE OR PERMIT	ocs
PROJECT DESCRIPTION		,	
Department of the Army - Draft Enhancement Project - Osceola (Environmental Impact Statement - Allig County, Florida.	ator Chain and Lake Gentry Extreme Drawdov	vn and Habitat
ROUTING:	RPC X B. Central FL R	APC .	
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PLEASE CHECK ALL THE LOCAL GOVERNMENTS BELOW FROM WHICH COMMENTS HAVE BEEN RECEIVED; ALL COMMENTS RECEIVED SHOULD BE INCLUDED IN THE RPC'S CLEARINGHOUSE RESPONSE PACKAGE. IF NO COMMENTS WERE RECEIVED, PLEASE CHECK "NO COMMENT" BOX AND RETURN TO CLEARINGHOUSE.

COMMENTS DUE TO RPC: 05/10/1999

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IF YOU HAVE ANY QUESTIONS REGARDING THE ATTACHED PROJECT, PLEASE CONTACT THE STATE CLEARINGHOUSE AT (904) 922-5438 OR SUNCOM 272-5438.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 5 " mon

District Engineer, Jacksonville P.O. Box 4970 Jacksonville, FL 32232

Attn.: Ms. Christine Bauer

Subject: Draft Environmental Impact Statement (EIS) for the Alligator Lake Chain and Lake Gentry Extreme Drawdown and Habitat Enhancement Project, Oceola County, FL

Dear Sir:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), EPA, Region 4 has reviewed the subject document, an evaluation of the immediate impacts and long-term consequences of an extreme drawdown of Alligator Lake Complex to 60.0' and Lake Gentry to 56.5. This action is an attempt to reverse the general decline of the lakes' aquatic habitat quality which resulted from altering (narrowing) the natural fluctuation in their water levels. After receiving input from concerned local agricultural/aquacultural interests, the original plan described in a recent environmental assessment was modified to minimize the potential effects of the lowered water levels.

Three action options were compared/contrasted to the noaction alternative of merely allowing the system to continue its present successional trend of increasing sediment loading and proliferation of aquatic vegetation. During the drawdown period (currently scheduled for 1999-2000) approximately 3450 acres of bottom sediments would dry, compact, and be manipulated in various ways; this would stimulate growth of desirable aquatic vegetation, adversely affect undesirable exotic vegetation, and increase overall productivity of fish and associated wildlife. number of structural measures may be installed to facilitate control of the drawdown, viz., temporary weir in Brick Lake Canal, temporary earthen plug with a culvert riser in C-32C, and use of pumps in selected locations. Approximately 475,000 cubic yards of muck will be removed during the operation with a portion of it used to create island habitat within the lakes; a tool which has proven invaluable to a broad spectrum of wildlife.

With the reductions in drawdown levels the scope/consequences of the action appear to be within acceptable limits in order to achieve project objectives. Therefore, we have no significant objections to the proposal and have assigned a rating of LO (lack of objections) to the preferred alternative.

Thank you for the opportunity to comment on this action. If we can be of further assistance in this matter, Dr. Gerald Miller (404-562-9626) will serve as initial point of contact.

Sincerely,

Heinz J. Mueller, Chief

Office of Environmental Assessment





FLORIDA GAME AND FRESH WATER FISH COMMISSION

MRS. GILBERT W. HUMPHREY THOMAS B. KIBLER JAMES L. "JAMIE" ADAMS JR. JULIE K. MORRIS QUINTON L. HEDGEPETH, DDS Miccosukee

Lakeland

Bushnell

Sarasota

ALLAN L. EGBERT, Ph.D., Executive Director VICTOR J. HELLER, Assistant Executive Director

Eustis Fisheries Research Lab

P. O. Box 1903

Eustis, FL 32727-1903

Phone: 352-357-6631 Fax: 352-357-6635

September 23, 1998

MEMORANDUM

TO:

Mike Hulon

FROM:

Homer Royals

SUBJECT:

Metals Results from Kissimmee Chain Sediments

Enclosed are the results of the August 1998 sediments collection from six Kissimmee chain lakes. These same lakes were analyzed in 1997 and the results are similar. The samples where organic matter was high had higher metals (Cu, Zn, Cd and Pb) concentrations. All are within normal ranges for metals in Florida sediments.

HER:sct

November 20, 1997 Sissimmee Chain and Lake Panasofkee Sediment Trace Metals

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	DENOVITI DE		#2368K5###	7/80	18695	245346	1000000	0206510			A.1640 3 F.	1878/2	77 0821318	1698613	10/67/19	4859.4	416813	C00490	100800 E	S S S S S S S S S S S S S S S S S S S	65(3)3		ALL WITH HARDA	27,4254 21 21,046,517	いただが	SECTION AND ADDRESS OF THE PERSON ADDRESS OF THE PERSON AND ADDRESS OF THE PERSON AND ADDRESS OF
Digest (0)	Pb	(na/a)	98.4	35.4	357.1	198.9	24.2	24.9	144.9	147.9	68.4	119.4	96.96	203.4	214.7	24.9	200.4	50.4	47.4	177.9	155.4				205	ī.
SONOO	[D]: 1/1/W/II	(()(())	GNAM	ON:	ND			ON.			90	90	ON.	QN.	QN			(60)/(62)	68/17/5	66664	\$240°99		AND DESCRIPTION			ender a la l
Digest	ပ္ပ	(b/bri)	QN	Q	QN	QN	QX	Q	107.9	113.6	OZ Z	Q	QN	Q	QN N	S	QN	136.1	144.5	147.3	158.6		2 2		S16	x
Zni in Gono		(CIGIKG)	W.47.87.6	136076	670897.6	88949	177538	M84184			443/18	3517.6	2458	289957	5/028	16686	50197	122,108	1209886	W265237	1250551		WANTOO CAN	20/15/20 20/15/20	25789	d record
Digest	Zinc	(b/br/)	198.9	170.7	446	417.8	191.8	202.4	280.1	325.9	184.8	223.6	220.1	347.2	234.2	174.2	241.3	495.4	477.8	587.2	597.8		£ 2	-	470	5
ONC.	ORY WAT		01000		93009	41/2869	7/1/97	2/L/S			91897	79/11/201	5(66)	166/105	1(676)		3(666)	1.0000 M	160997	100/17	(5000)		VOLUMENT OF THE PROPERTY OF	387.09145	14909	
Digest	ನ	(l/grl)								152.0													7#	<u>.</u>		
Sample	¥	(6)	2.0440	2.1580	2.1340	2.2640	0.5000	0.5000	0.5000	0.5000	2.0620	3.1020	4.0020	0.5610	2.2650	2.4700	2.0000	1.0050	1.0210	1.0040	1.0820		CENTER	PAN#1	PAN#2	
		%Inorg	98.4	91.2	99.5	96.4	91.0	91.0	91.0	91.0	98.9	97.6	89.4	93.7	98.7	96.4	83.2	89.7	89.7	90.7	90.7		#4	#P1	#P2	
		%Org	1.6	8.8	0.5	3.6	9.0	9.0	9.0	9.0	7:	2.4	10.6	6.3	1.3	3.6	16.8	10.3	10.3	9.3	9.3					
		Sample	ALL#1	ALL#2	ALL#3	COON	CENTER#1	CENTER#1	CENTER#1	CENTER#1	CENTER#2	GENTRY#1	GENTRY#2	LIZZIE#1	LIZZIE#2	TROUT#1	TROUT#2	PAN#1	PAN#1	PAN#2	PAN#2	Aean for Duplicates				
		ABID		- •	~			SDUP	SPIKE	SPIKE	, <u> </u>		~	•	0		7	7	1DUP	^ر 2	2DUP	Aean for				

2A Results from Sample #5

2.0	120.4	123.4
0.0	107.9	113.6
3.8	83.0	128.8
0.0	114.0	100.6
Duplicate %RSD=	Spike % Recover 114.0	•

	(9)	PWATE	(G)	1972411s	(1839)	2206	7/35.6	9836	239218	Se 261 A	0.7117.0	7000 8	000	10/4 3	1000	2,018,01	884168
	Digest (CO)	ob Oc	/b/I) (b/bri	98.2	136	115.5	74.4	84.2	241.9	433.2	439.7	679.6	93.9	665.5	88.5	20.4	57.1
	OONIC	DEN' WAT	(Lighter)	(a) NICE AND ADDRESS OF THE PARTY OF THE PAR	02	(O.V.)	(Q) X	3 (2)	14,776.1	6.26	() () () () () () () () () ()	21/29 7	ON	(de);	6	9.6	0.0
	Digest	ප	(b/brl)	QN	Q	QN	Q	QN	149.1	8.0	13.9	183.0	QN	11.9	S	QN	ON .
Z	ું ગૂર્	[]RY 13/7	(bolke)	27.98	2002	3(96)2	000	() 17.3 (A)	3.69.	510210	, (Bo)(V)	90000000000000000000000000000000000000	1 (0696)	(3)4.7c)	1898	72020	22865
-	Digest	Zinc	(6/6rl)	281.6	297.7	249.5	217.4	185.3	351.8	431.4	559.8	789.9	260.2	570.5	238.8	217.4	206.7
	ેલ્ગ્રહ	DEW WILL	((ogrika)	2500	11.03.1	£1065	100 A	900	0.636	00816	22876	1,7(69)	18.00 W	24.63.6	7/0.2	(P) (J)	(169.6)
CALAN	Digest	చె	(l/grl)	25.2	19.2	31.2	7.1	1.1	170.0	188.1	242.3	489.6	19.2	224.2	7.1	1.1	13.1
	Sample		(6)	5.0000	5.0360	4.6460	5.0000	5.0000	5.0000	4.0000	4.0000	4.0000	5.1070	4.3200	5.0270	4.8830	4.5020
Metals			6Inorg	99.2	99.2	98.2	99.0	99.0	99.0	93.1	93.1	93.1	99.3	95.7	99.3	100.0	9.66
ent Trace			%Org %Inc	9.0	0.8	1.8	1.0	1.0	1.0	6.9	6.9	6.9	0.7	4.3	0.7	0.0	0.4
October 22, 1998 Kissimmee Chain Sediment Trace Met File: KISSSEDS2.WB3			Sample	Gentry 1	Gentry 2	Alligator 1	Alligator 2	Alligator 2	Alligator 2	Alligator 3	Alligator 3	Alligator 3	Lizzie	Trout	Coon	Center 1	Center 2
October 22, 1998 Kissimmee Chain File: KISSSEDS2			LABID	1	2	က	4	4 DUP	4 SPIKE	9	5 DUP	5 SPIKE	9	7	8	6	10

0.0 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7	495.6 57,675 495.6 57,675 11.3 75.2 18.3	4.1 25004.04 104.4 83.0 17.8 137.2	#7 Alligator #3 #7 Alligator #3 Duplicate %RSD= Spike % Recovery= Duplicate %RSD= Spike % Recovery=	OA Results from Sample #4 Du Sp
		495.6 (57/6/15) 495.6 (57/6/15) 11.3 75.2 18.3 147.2		104.4 83.0 17.8 137.2

Mean for Duplicates

Conversion from Concentration (µg/L) in digestate to Concentration in Dry Sed. (µg/Kg) for Gentry #1 Copper.

250 µg Cu Dry Wt. kg Sed.
ŧI
1000g 1 kg
×
99.2g Inorg 100 g Samp
×
1L 1000 ml
×
50 ml 5.000g
×
25.2µg Си L

Environmental Conservation Laboratories 10207 General Drive Orlando, Florida 32824-8529 407 / 826-5314 Fax 407 / 850-6945 www.encolabs.com



DHRS Cortification No. E83182

March 31, 1999

Ms. Adriene Furukawa Florida Game & Fish Commission Suite Al Kissimmee, FL 34741

Login Number(SDG): OR5765

Description:

Lake Toho Draw Down

Case Narrative:

Six soil samples were collected on February 24, 1999. All samples were received at ENCO Laboratories, Inc., on February 24, 1999 on wet ice and in good condition. All samples were anlayzed as requested on the associated sample chain-of-custody forms.

All samples were extracted and analyzed within EPA specified holding times.

The laboratory analyzed the samples for chlorinated pesticides as listed in EPA SW846 Method 8081 (GC/ECD). The laboratory did not detect any of the method listed pesticides (24) to the laboratory determined level of detection (Method Detection Level).

Should you require further information or clarification regarding this report, please do not hesitate to contact me directly.

Respectfully.

Environmental Conservation Laboratories, Inc.

David J. Vesey

Mgr., Client Services

Environmental Conservation Laboratories 10207 General Drive Orlando, Florida 32824-8529 407 / 826-5314 Fax 407 / 850-6945 www.encolabs.com



DHRS Certification No. E83182

CLIENT : Florida Game & Fish Commission

ADDRESS: 600 N. Thacker Avenue

Suite A1

Kissimmee, FL 34741

: OR5577 REPORT #

DATE SUBMITTED: February 24, 1999
DATE REPORTED: March 8, 1999

PAGE 1 OF 9

ATTENTION: Adriene Furukawa

SAMPLE IDENTIFICATION

Samples submitted and identified by client as:

Lake Toho Draw Down

02/24/99

- SITE #1 @ 09:45 #1 - SITE #2 @ 10:10 #2 - SITE #3 @ 10:37 #3 #4 - SITE #4 @ 11:15 #5 - SITE #5 @ 11:44 - SITE #6 @ 12:20

COJECT MANAGER

REPORT # : OR5577

DATE REPORTED: March 8, 1999

PROJECT NAME : Lake Toho Draw Down

PAGE 2 OF 9

EPA METHOD 8081 - DRGANOCHLORINE PESTICIDES	SITE #1	SITE #2	Units
alpha-BHC	2.4 U	. 2.6 U	μg/Kg
eta-BHC	2.4 U	2.6 U	μg/Kg
:amma-BHC (Lindane)	2.4 U	2.6 U	μg/Kg
eptachlor	2.4 U	2.6 U	μg/Kg
ielta-BHC	2.4 U	2.6 U	μg/Kg
rin	2.4 U	2.6 U	μg/Kg
tachlor Epoxide	2.4 U	2.6 U	μg/Kg
nlordane gamma	2.4 U	2.6 U	μg/Kg
hlordane alpha	2.4 U	2.6 U	μg/Kg
ndosulfan I	2.4 U	2.6 U	μg/Kg
, 4 ' -DDE	2.4 U	2.6 U	μg/Kg
ieldrin	2.4 U	2.6 U	μg/Kg
ndrin	2.4 U	2.6 U	μg/Kg
, 4 ' -DDD	2.4 U	2.6 U	μġ/Kg
ndosulfan II	2.4 U	2.6 U	μg/Kg
, 4 ' -DDT	2.4 U	2.6 U	μg/Kg
ndrin aldehyde	2.4 U	2.6 U	μg/Kg
ndosulfan sulfate	2.4 U	2.6 U	μg/Kg
ethoxychlor	14 U	16 U	μg/Kg
ndrin Ketone	3.3 U	3.6 U	μg/Kg
nlordane (Total)	47 U	52 U '	μg/Kg
xaphene	95 U	100 U	μg/Kg
odrin	4.7 U	5.1 U	· μg/Kg
rex	4.7 U	5.1 U	μg/Kg
i <u>rrogate:</u>	% RECOV	% RECOV	LIMITS
4,5,6-TCMX	126	120	30-150
∘C	108	110	37-128
te Extracted	03/01/99	03/01/99	
te Analyzed	03/03/99	03/03/99	

TE: Analyte values are reported on a dry weight basis.

⁻ Compound was analyzed for but not detected to the level shown.

REPORT # : OR5577

DATE REPORTED: March 8, 1999

PROJECT NAME : Lake Toho Draw Down

PAGE 3 OF 9

ISCELLANEOUS	METHOD	SITE #1	SITE #2	<u>Units</u>
ercent Solids	SM2540G	70	64	% .
at e Analyzed	•	03/05/99	03/05/99	

REPORT # : OR5577

DATE REPORTED: March 8, 1999

PROJECT NAME : Lake Toho Draw Down

PAGE 4 OF 9

EPA METHOD 8081 - ORGANOCHLORINE PESTICIDES	SITE #3	SITE #4	<u>Units</u>
ılpha-BHC	2.4 U	2.5 U	μg/Kg
peta-BHC	2.4 U	2.5 U	μg/Kg
famma-BHC (Lindane)	2.3 U	2.5 U	μg/Kg
[eptachlor	2.4 U	2.5 U	μg/Kg
lelta-BHC	2.4 U	2.5 U	μg/Kg
drin	2.3 U	2.5 U	μg/Kg
tachlor Epoxide	2.3 U	2.5 U	μg/Kg
infordane gamma	2.4 U	2.5 U	μg/Kg
hlordane alpha	2.3 U	2.5 U	μg/Kg
indosulfan I	2.4 U	2.5 U	μg/Kg
: , 4 ' -DDE	2.4 U	2.5 Ŭ	μg/Kg
ieldrin	2.4 U	2.5 U	μg/Kg
ndrin	2.4 U	2.5 U	μg/Kg
, 4'-DDD	2.3 U	2.5 U	μg/Kg
indosulfan II	2.4 U	2.5 U	μg/Kg
, 4 ' - DDT	2.4 U	2.5 Ŭ	μg/Kg
ndrin aldehyde	2.3 U	2.5 U	μg/Kg
ndosulfan sulfate	2.3 U	2.5 U	μg/Kg
ethoxychlor	14 U	15 U	μg/Kg
ndrin Ketone	3.2 U	3.4 U	μg/Kg
hlordane (Total)	46 U	50 U	μg/Kg
oxaphene	93 U	99 U	μg/Kg
sodrin	4.6 U	4.9 U +	μg/Kg
irex	4.6 U	4.9 U	μg/Kg
urrogate:	% RECOV	% RECOV	LIMITS
4,5,6-TCMX	126	120	30-150
3C	120	112	37-128
ite Extracted	03/01/99	03/01/99	
ite Analyzed	03/03/99	03/03/99	

TE: Analyte values are reported on a dry weight basis.

⁼ Compound was analyzed for but not detected to the level shown.

REPORT # : OR5577

DATE REPORTED: March 8, 1999

PROJECT NAME : Lake Toho Draw Down

PAGE 5 OF 9

MISCELLANEOUS	METHOD	SITE #3	SITE #4	<u>Units</u>
ercent Solids Date Analyzed	SM2540G	72 03/05/99	6 7 03/05/99	ક